

IN THE CLAIMS

Please amend the claims as follows:

1. (original) A method of generating motion blur in a graphics system, the method comprising:

- receiving (RA; RSS; RTS) geometrical information (GI) defining a shape of a graphics primitive (SGP; TGP),
- providing (DIG) displacement information (DI) determining a displacement vector (SDV; TDV) defining a direction of motion of the graphics primitive (SGP; TGP),
- sampling (RA; RSS; RTS) the graphics primitive (SGP; TGP) in the direction indicated by the displacement vector (SDV; TDV) to obtain input samples (R_{Pi}; R_{Ii}), and
- one dimensional spatial filtering (ODF) of the input samples (R_{Pi}; R_{Ii}) to obtain temporal pre-filtering.

2. (original) A method as claimed in claim 1, wherein the step of providing (DIG) displacement information (DI) further defines an amount of motion of the graphics primitive (SGP; TGP), and wherein the step of one dimensional spatial filtering (ODF) is arranged to obtain the temporal pre-filtering with a size of a filter footprint (FP) that depends on the magnitude of the displacement vector (SDV; TDV).

3. (original) A method as claimed in claim 1, wherein the displacement vector (SDV; TDV) is supplied by a 2D or a 3D application.

4. (original) A method as claimed in claim 1, wherein the step of providing (DIG) displacement information (DI) receives a model-view transformation matrix from a 2D or a 3D application, said matrix defining the position and orientation of the graphics primitive (SGP; TGP) of a previous frame.

5. (original) A method as claimed in claim 1, wherein the step of providing (DIG) displacement information (DI) buffers a position and an orientation of the graphics primitive (SGP; TGP) of a previous frame to calculate the displacement vector (SDV; TDV).

6. (original) A method as claimed in claim 1, wherein

- the graphics system is arranged for displaying pixels (Pi) having a pixel intensity (PIi) on a display screen (DS), the pixels (Pi) being positioned on pixel positions (x,y) in a screen space (SSP),
- the step of sampling (RA; RSS; RTS) is adapted for sampling (RSS) in the screen space (SSP) in a direction of a screen

displacement vector (SDV) being the displacement vector mapped to the screen space (SSP) to obtain resampled pixels (R_{Pi}),

- the method further comprises an inverse texture mapping (ITM) receiving coordinates of the resampled pixels (R_{Pi}) to supply intensities (R_{Ip}) of the resampled pixels (R_{Pi}),
- the step of one dimensional spatial filtering (ODF) comprises averaging (AV) of the intensities (R_{Ip}) of the resampled pixels (R_{Pi}) to obtain averaged intensities (A_{RIp}) in accordance with a weighting function (WF),
- the method further comprises a resampling (RSA) of the averaged intensities (A_{RIp}) of the resampled pixels (R_{Pi}) to obtain the pixel intensities (P_{Ii}).

7. (original) Method as claimed in claim 1, wherein

- the graphics system is arranged for displaying pixels (P_i) having a pixel intensity (P_{Ii}) on a display screen, the pixels (P_i) being positioned on pixel positions (x,y) in a screen space (SSP),
- the method further comprises providing appearance information (TA, TB) defining an appearance of the graphics primitive (SGP) in the screen space (SSP) by defining texel intensities (T_i) in a texture space (TSP),
- the step of sampling (RA; RSS; RTS) is adapted for sampling (RTS) in the texel space (TSP) in a direction of a texel

displacement vector (TDV) being the displacement vector mapped to the texel space (TSP) to obtain resampled texels (RTi),

- the method further comprising interpolating (IP) the texel intensities (Ti) to obtain intensities (RIi) of the resampled texels (RTi),
- the step of one dimensional spatial filtering (ODF) comprises averaging (AV) the intensities (RIi) of the resampled texels (RTi) in accordance with a weighting function (WF) to obtain filtered texels (FTi),

the method further comprises:

- mapping (MSP) the filtered texels (FTi) of the graphics primitive (TGP) in the texture space (TSP) to the screen space (SSP) to obtain mapped texels (MTi),
- determining (CAL) intensity contributions from a mapped texel (MTi) to all the pixels (Pi) of which a corresponding pre-filter footprint (PFP) of a pre-filter (PRF) covers the mapped texel (MTi), the contribution being determined by an amplitude characteristic of the pre-filter (PRF), and
- summing (CAL) the intensity contributions of the mapped texel (MTi) for each pixel (Pi).

8. (currently amended) A method as claimed in claim 6 or 7, wherein at least a direction of the displacement vector (SDV; TDV)

of the graphics primitive (GP) is an average of directions of displacement vectors of vertices of the graphics primitive.

9. (original) A method as claimed in claim 6, wherein the step of one dimensional filtering (ODF) comprises:

- distributing, in the screen space (SSP), the intensities (R_{IP}) of the resampled pixels (R_{Pi}) in a direction of the displacement vector (SDV) over a distance determined by a magnitude of the displacement vector (SDV) to obtain distributed intensities (D_{II}i), and
- averaging overlapping distributed intensities (D_{II}i) of different pixels (P_i) to obtain a piece-wise constant signal being the averaged intensities (A_{RPi}).

10. (original) A method as claimed in claim 7, wherein the step of one dimensional filtering (ODF) comprises:

- distributing, in the texture space (TSP), the intensities (R_{II}i) of the resampled texels (R_{Ti}) in a direction of the displacement vector (TDV) over a distance determined by a magnitude of the displacement vector (TDV) to obtain distributed intensities (T_{DI}i), and

- averaging overlapping distributed intensities (TDII) of different resampled texels (RTi) to obtain a piece-wise constant signal being the filtered texels (FTi).

11. (original) A method as claimed in claim 7, wherein the step of one dimensional spatial filtering (ODF) is arranged for applying a weighted averaging function (WF) during at least one frame-to-frame interval.

12. (currently amended) A method as claimed in claim 9 or 10, wherein the distance is rounded to a multiple of the distance (DIS) between resampled texels (RTi).

13. (original) A graphics computer system comprising:

- means for receiving (RA; RSS; RTS) geometrical information (GI) defining a shape of a graphics primitive (SGP, TGP),
- means for providing (DIG) displacement information (DI) determining a displacement vector (SDV; TDV) defining a direction of motion of the graphics primitive (SGP; TGP),
- means for sampling (RA; RSS; RTS) the graphics primitive (SGP; TGP) in the direction indicated by the displacement vector (SDV; TDV) to obtain input samples (RPI; RIi), and

- means for one dimensional spatial filtering (ODF) of the input samples (RPi; RIi) to obtain temporal pre-filtering.